ATTACHMENT 1

KNOW THESE MARKERS

BENCH
(Old Type)

BENCH
(New Type)
Two Bench Marks Consolidated

BENCH
(Old Type)

TRAVERSE

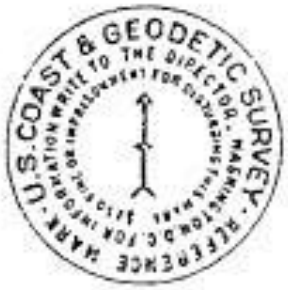
TRIANGULATION

GRAVITY
(Old Type)

GRAVITY
(New Type)

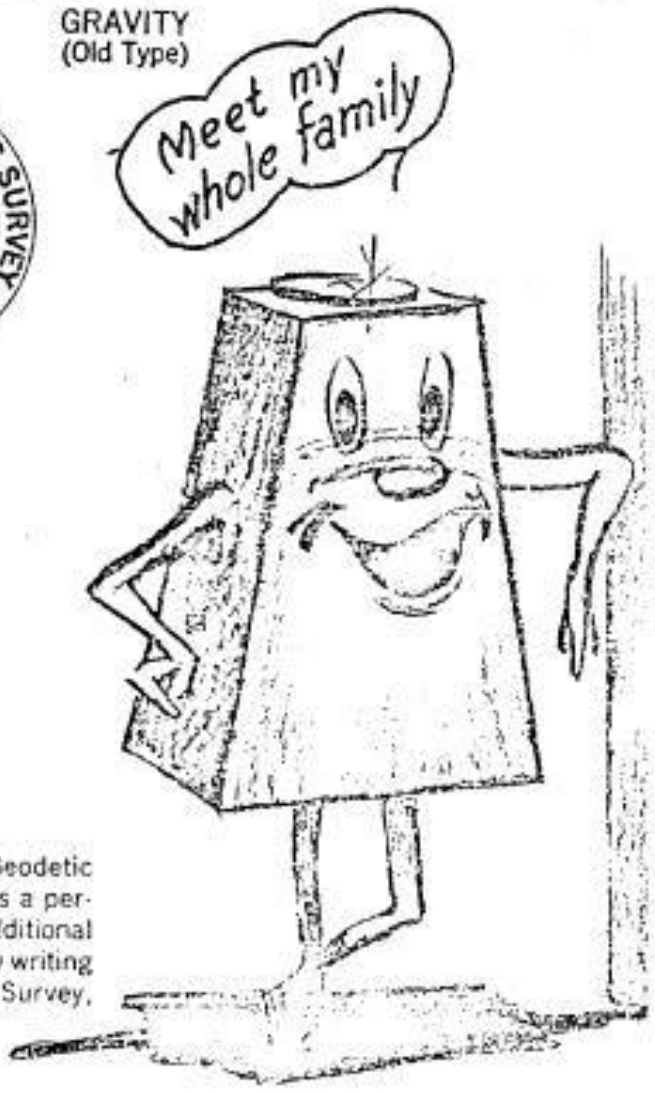
TOPOGRAPHIC

AZIMUTH



REFERENCE

MAGNETIC



FACE LEGENDS

Standard bronze station marks of the Coast and Geodetic Survey that are set in concrete or bedrock to serve as a permanent mark for the particular station it represents. Additional information concerning these marks may be obtained by writing to the Director, United States Coast and Geodetic Survey, Washington 25, D.C.

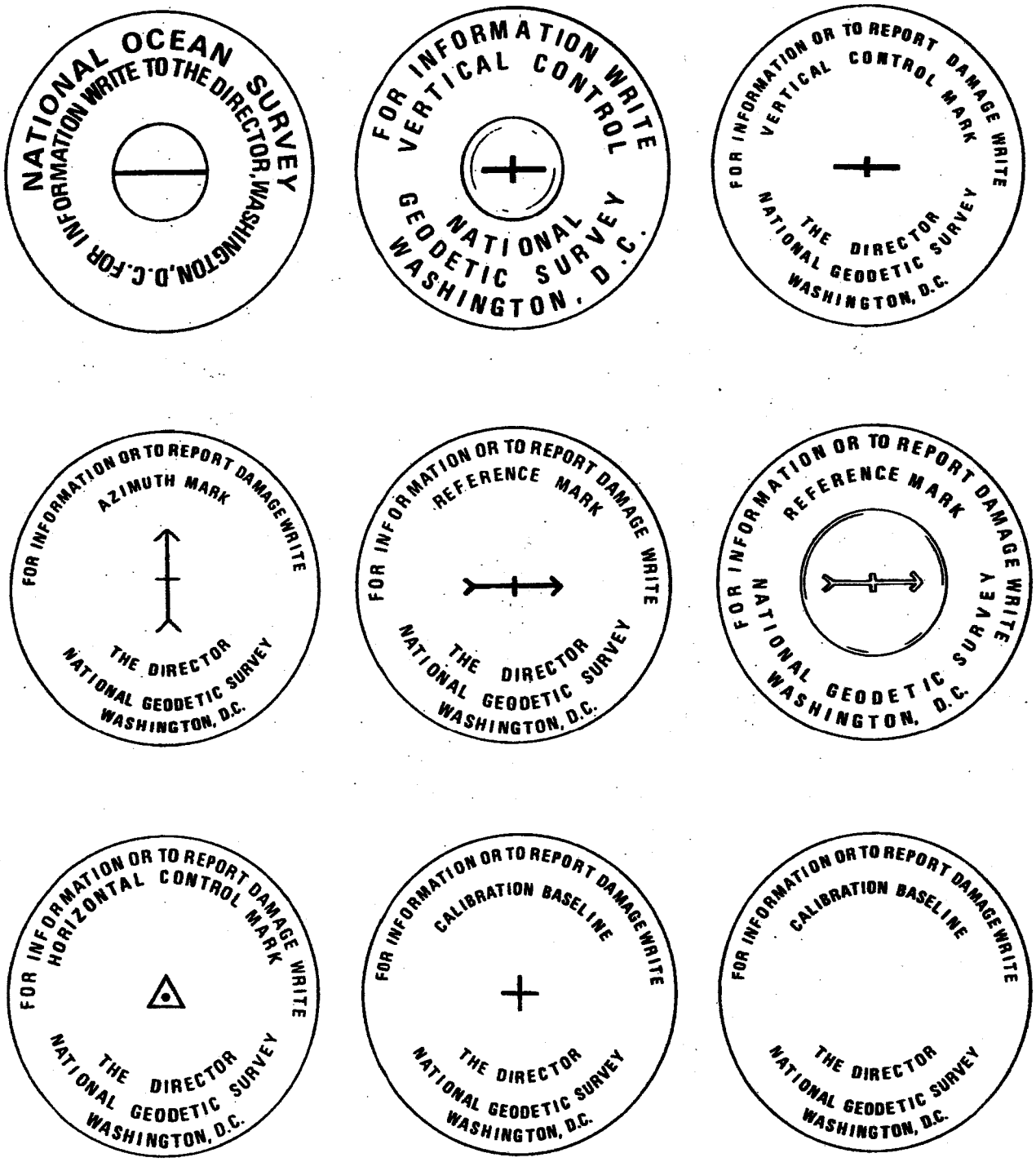


Figure 3b.—Standard marks of the National Ocean Survey/National Geodetic Survey

Attachment 2
Federal Base Network
Station Selection Guidelines

(Revised & ESC Approved: 8 MAY 96)

Monumented points at all NGS-approved continuously operating reference stations (CORS) will be stations of the Federal Base Network (FBN). This document provides the guidelines to be used to select additional FBN stations. These guidelines address the issues of selection priorities, station spacing, monumentation, stability, and accessibility.

Selection Priorities

Station selection shall be based on the following priorities which are given in order with the highest priority first. Within each priority category, preference should be given to selection of older monuments having a known history of previous measurements. Each FBN station should be selected from:

1. Existing A- and B-order station, where possible. At special survey sites such as CORS, WAAS, and VLBI, where several high accuracy monumented stations exist, only one of the monumented stations shall be selected as a FBN. In cases where a protected area exists at the site, the most accessible station shall be selected as the FBN. Other stations at the site shall be designated as CBNs, with the appropriate agency being responsible (FAA, USCG, or State agency).

2. Primary Airport Control Stations (PACS) will be candidates for FBN station selection. Those PACS that are not selected as FBNs will be designated as Cooperative Base Network (CBN) stations, with the responsible agency being FAA. The Secondary Airport Control Stations (SACS) will be designated as User Densification Network (UDN) stations; the responible agency again being FAA. Where necessary, an additional nearby station, which is easily accessible by the public, will be established and directly connected to the airport station.

3. Existing National Geodetic Reference System (NGRS) station with a first- or second-order elevation AND first- or second-order horizontal coordinates, with higher accuracy classification being preferred both vertically and horizontally (giving vertical accuracy top priority).

4. Existing NGRS station with first- or second-order elevation, again the higher accuracy classification being preferred.

5. Existing NGRS station with first- or second-order horizontal coordinates which would require a minimum amount of first- or second-order leveling to establish a precise elevation (within 10 km).

6. New station or existing station not in NGRS suitable for GPS observations, set in bedrock, which would require a minimum amount of first- or second-order leveling to establish a precise elevation (within 10 km).

7. New station or existing station not in NGRS suitable for GPS observations, established by setting a 3D monument, which would require a minimum amount of first- or second-order leveling to establish a precise elevation (within 10 km).

Station Spacing

Unless specified otherwise, the overall FBN shall consist of stations spaced on average approximately 100 km apart. The actual station spacing shall be flexible enough (from 50 km up to 150 km) to allow for optimum station selection. In addition, existing horizontal NGRS stations should be selected in a pattern so that overall, these stations are located in each one-degree block throughout the project. When impossible to meet the above criteria, an additional first- or second-order horizontal NGRS station must be recovered that is suitable for GPS observations. These additional stations shall be selected approximately midway between FBN stations.

Monumentation and Station Environment

- The following are a list of considerations for every monument in the FBN. The intent is to ensure that station monuments will be locally stable and remain usable indefinitely. Each of these considerations is important.
- Adequate GPS satellite visibility (unrestricted at 15 degrees above the horizon). Minor obstructions may be acceptable, but must be depicted on the Visibility Obstruction Diagram.
- Accessible by vehicle (two-wheel drive preferred).
- Stability, bedrock mark being most preferred. (See Stability)
- Permanency.
- Ease of recovery.
- Minimal multi-path sources.
- Appropriate geographic location and spacing.
- Location allows efficient use by surveying community.
- Accessible by public. (See Accessibility)
- No known potential conflict with future development.
- Aerial-photo identifiable.
- Free of electronic interference.

Stability

Mark stability is difficult to assess in the field with limited resources. For existing NGRS station monumentation, the NGS database contains stability qualifiers which were assigned for the majority of marks when they were set. Existing NGRS stations must have a stability quality code of ? C? or better. Quality codes A and B are preferred. New monuments will have a stability quality code of B or better. Quality codes are as follows:

Quality Code A = most reliable which are expected to hold an elevation. Examples: Rock outcrops; rock ledges; rock cuts; bedrock; massive structures with deep foundations; large structures with foundations on bedrock; or sleeved deep settings (10 feet or more) with galvanized steel pipe or galvanized steel, stainless steel, or aluminum rods.

Quality Code B - probably hold an elevation. Examples: Unsleeved deep settings (10 feet or more) with galvanized steel pipe or galvanized steel, stainless steel or aluminum rods; massive structures other than those listed under code A; massive retaining walls; abutments and piers of large bridges or tunnels; unspecified rods or pipe in a sleeve less than 10 feet; or sleeved copper-clad steel rods.

Quality Code C - may hold precise elevation but subject to ground movement. Examples: Metal rods with base plates less than 10 feet deep; concrete posts (3 feet or more deep); unspecified rods or pipe more than 10 feet deep; large boulders; retaining walls for culverts or small bridges; footings or foundation walls of small to medium-size structures; or foundations such as landings, platforms, or steps.

Quality Code D - questionable stability. Examples: Generally, objects of unknown character; shallow set rods or pipe (less than 10 feet); light structures; pavements such as streets, curbs, or aprons; piles and poles such as spikes in utility poles; masses of concrete; or concrete posts less than 3 feet deep.

Quality code C exception -- When selecting FBN stations, only quality codes A and B are recommended. However, concrete posts may be selected with a C stability if the mark is deemed stable from review of historical releveling, soil type, and frost depth. Final selection is subjective, and it is based on local knowledge of soil and frost heave, plus knowledge of how well the mark has held its horizontal and vertical positions over the years.

Accessibility

Accessible public property should be utilized where feasible. If the station is located on private property, permission must be obtained from the land owner for station accessibility. The name of the person or organization granting permission to occupy the station, and a telephone number, must be noted in the station description.

Airport: MERIDEN MARKHAM MUN (MMK)

Station: MMK C - PROPOSED

Designation: SACS

View: NORTH

Airport: DANIELSON (5B3)

Station: 5B3 A - PROPOSED **Designation:PACS**

View: NORTHEAST

Station Location Sketch and Visibility Diagram

Location / Airport Name
and ID_____ Project _____

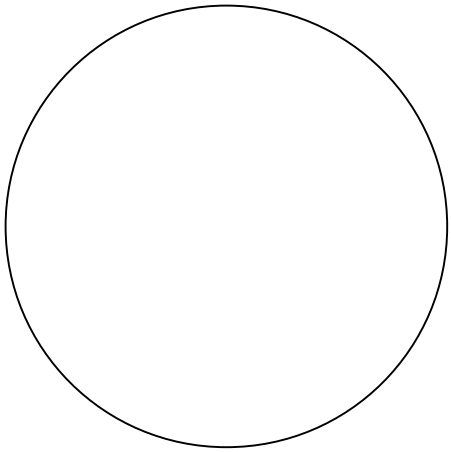
Station Designation _____ PID_____ Date_____

Circle all applicable:
PACS SACS BM FBN CBN OTHER_____

Observer &
Organization_____

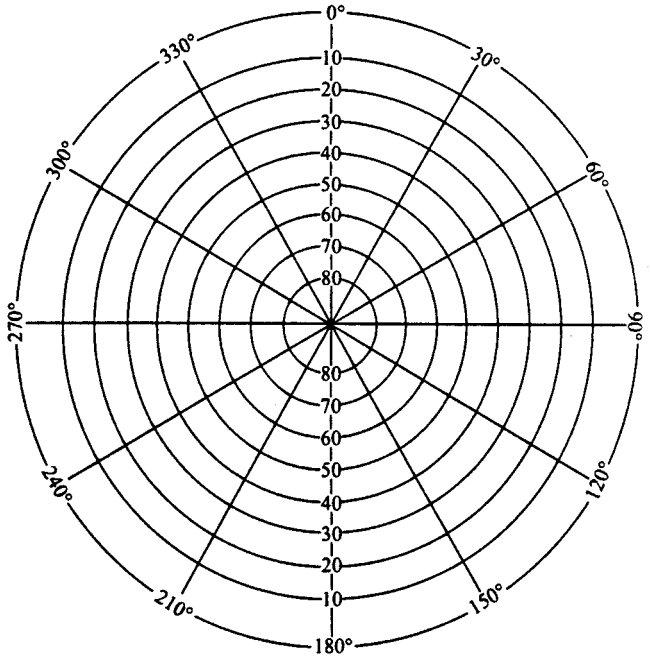
Station Location Sketch

Sketch of Disk



Visibility Diagram

☐ No Obstructions



WOOLPERT

Station Recovery Log

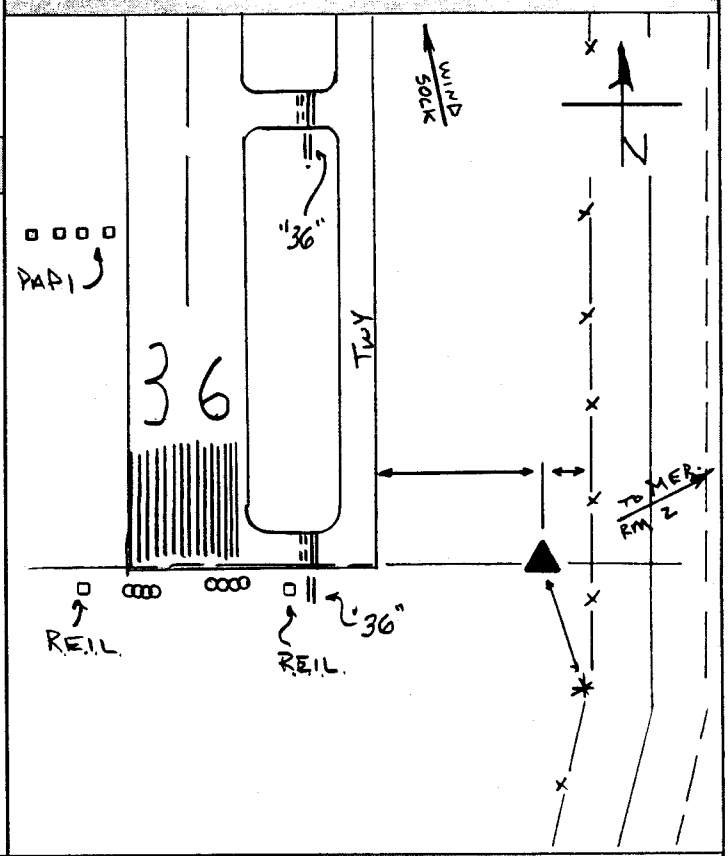
Station #: MMK C (MMK, CT.)
Project Name: NE ANA (SURVEY)
Job Number: 57338
Local Date: 18 DEC. 99
Name: BJM

TO-REACH DIRECTIONS

FROM TERM. LATTE, GO W. 0.05 MI TO TWY, TURN LEFT & GO S. 0.60 MI ON TWY TO END & STA. ON THE LEFT.

4" x 12in ⌀ CONC. MON.

STATION LOCATION

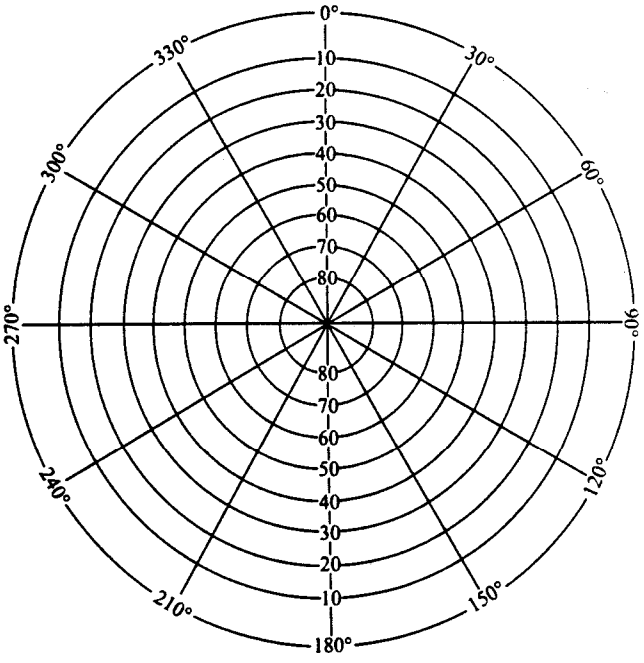


REFERENCES

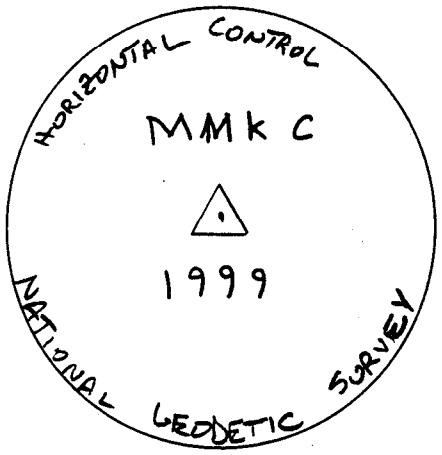
Reference Object	Distance	Azimuth
E.O.P. W/ TWY	62.94	E
C.L.F. LINE	6.10	W
BEND IN FL @ FENCE POST	37.23	340°

VISIBILITY DIAGRAM

☒ No Obstructions



DISC DETAIL



SET 08/NOV 99

Station Recovery Log

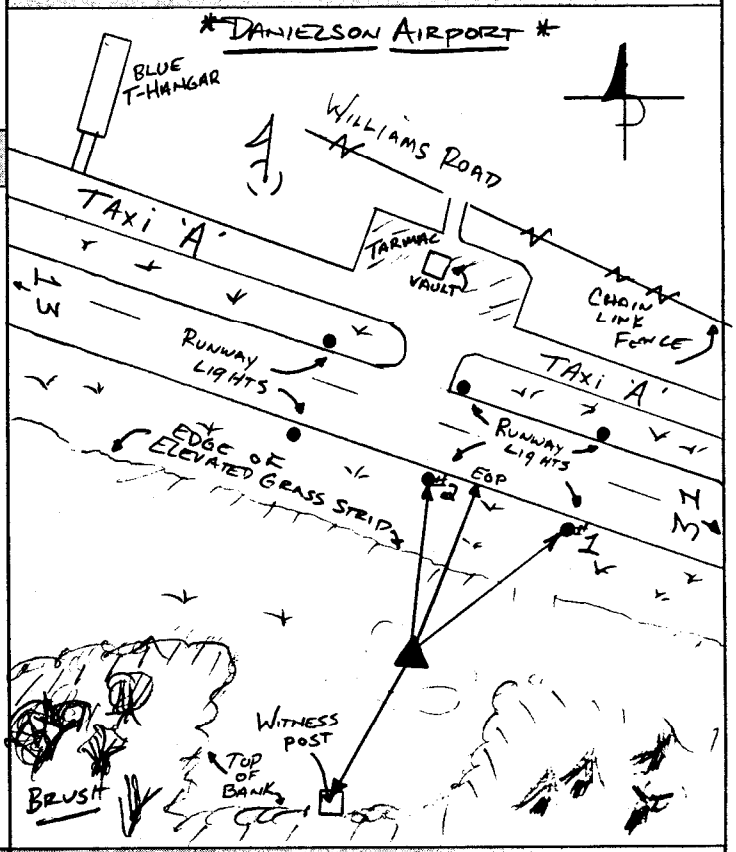
WOOLPERT

Station #: SB3 A *Proposed PACS* (SB3)
Project Name: NE ANA Survey
Job Number: 57738
Local Date: 15-DEC-99
Name: EJR

TO-REACH DIRECTIONS

From Terminal: 700' West to Runway 31; Cross Runway 31 & Turn Right (NW) Go 0.15 mile along Grass Strip to Station on Left.

STATION LOCATION

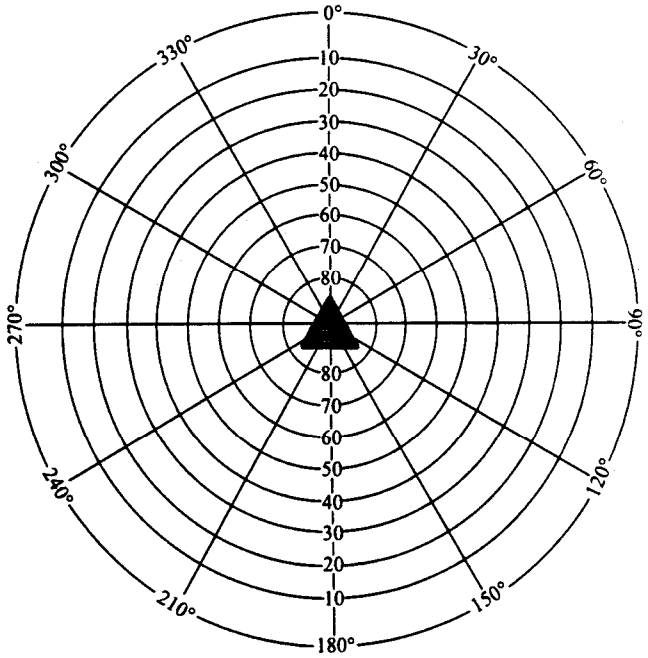


REFERENCES

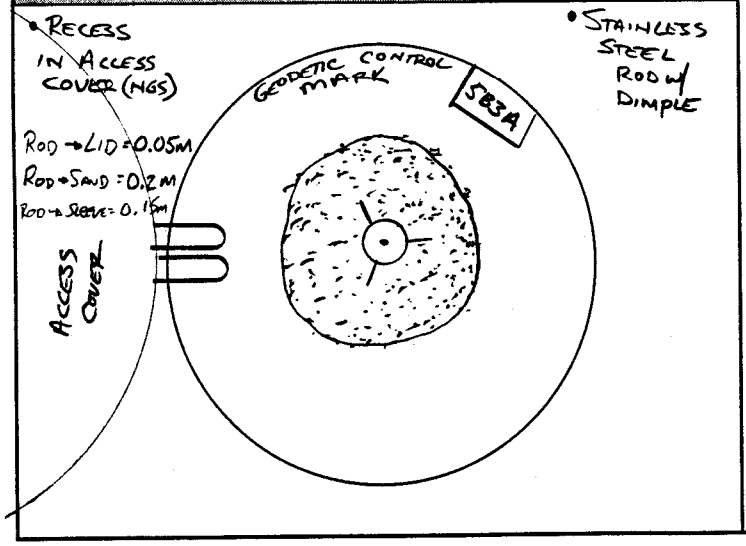
Reference Object	Distance(m)	Azimuth
Runway Light #1 [Tag #25]	59.651	250°
Runway Light #2	65.843	192°
Witness Post	24.782	58°
Edge Pavement Runway 13-31	58.196	225°

VISIBILITY DIAGRAM

☒ No Obstructions



DISC DETAIL



Attachment 5
Writing Station Descriptions

Descriptions are one of the end products of surveying, along with the positions and the survey marks themselves. All three must be of highest quality. The descriptions must be complete, accurate, and in standardized format if the station is to be reliably recovered for use in the future. Descriptions will be in the standard NGS format of three paragraphs as described below under "Description Format." A **"description"** details the location of a new survey mark, or one not previously in the NGS digital database. A **"recovery note"** is an update and/or refinement to a description already in the NGS digital database, written upon a return visit to a survey mark. If an existing NGS horizontal or USC&GS triangulation station digital description is complete, accurate, and meets Blue Book requirements, the station may be recovered with a brief recovery note, such as "Recovered as Described." If minor changes or additions to the description are required, they may be added after the above phrase, such as "Recovered as described, except a new wooden fence is now 3 meters north of the station." General description requirements are given in Chapter 3 of the Blue Book, page 3-1. Descriptions and Recovery notes must be properly encoded into a D-file by using NGS DDPROC software.

Descriptions and recovery notes must be written by one person and checked by another. For example, a mark setter can draft a description immediately after setting the mark, and an observer can check a description during observations. Descriptions should be written immediately after visiting a station so that all details are fresh.

A complete, new, three-paragraph description is required for stations where:

- There is no NSRS digital description (not in NGS database)
- For all vertical stations (bench marks) unless a complete (usually three paragraph), accurate, up-to-date digital description exists in the NGS database.
- Where major changes have occurred, major inaccuracies found, or where required information is missing.
- Generally for stations other than NGS horizontal or USC&GS triangulation stations.

Description Format:

USC&GS Special Publication No. 247, MANUAL OF GEODETIC TRIANGULATION, page 116 states, "A description must be clear, concise, and complete. It should enable one to go with certainty to the immediate vicinity of the mark, and by the measured distances to reference points and the description of the character of the mark, it should inform the searcher of the exact location of the mark and make its identification certain. It should include only essential details of a permanent character."

The **first paragraph** is the "Description of Locality." This part of the description begins by referring to the distance and direction (cardinal or inter-cardinal point of the compass) from the nearest well-known mapped geographic feature(s), usually the nearest city or town. Always progress from the farthest to the nearest reference point. State the name of the airport the mark is on or near, and include station location relative to runways and other airport features. Distances in this part of the description should be in kilometers (miles) or meters (feet). Detailed

measurements which appear elsewhere in the description should not be repeated in this paragraph. Points of the compass should be fully spelled out. State the name, address, and phone number of the airport manager or property owner. State any advance notice and security access requirements for reaching the station.

The **second paragraph** is the "Directions To Reach the Station." This section is one of the most useful parts of a description. It usually enables a stranger to go directly to a station without the delay due to a detailed study of maps or of making local inquiries. It is a route description which should start from a definite point, such as (a) the nearest intersection of named or numbered main highways (which are shown on commonly used road maps), (b) the post office of the nearest town, or (c) some definite and well-known geographical feature. Odometer distances should be given to tenths of kilometers (tenths of miles). The general direction of travel should be given. Turns from one road to another road should be indicated by the kind of turn (right or left) followed by a point of the compass and the name or number of the road. The final statement should end with "to station on the right (or left)." For example:

> TO REACH THE STATION FROM THE POST OFFICE ON MAIN STREET IN JONESVILLE, GO EASTERLY ON STATE HIGHWAY 101 FOR 3.7 KM (2.3 MILES) TO AN INTERSECTION. TURN RIGHT AND GO SOUTH ON MILLER ROAD FOR 5.1 KM (3.2 MILES) TO A T-ROAD RIGHT. CONTINUE SOUTH ON MILLER ROAD FOR 6.6 KM (4.1 MILES) TO AN INTERSECTION. TURN LEFT AND GO EAST ON SMITH ROAD FOR 2.4 KM (1.5 MILES) TO STATION ON THE LEFT IN THE FENCE LINE."

Use the word "EAST" if the road goes due east and "EASTERLY" if the road wanders in a generally easterly direction. Use intermediate references, as above, if the distance becomes longer than about 5 miles.

The **third paragraph** provides details of the mark and reference measurements. This section should give a short description of the station mark, such as:

> THE STATION IS THE TOP CENTER OF A STAINLESS STEEL ROD DRIVEN TO (A REFUSAL or A SLOW DRIVING RATE) DEPTH OF 18M. THE ROD IS RECESSED 9.5 CM BELOW GROUND LEVEL IN A 90 CM GREASE FILLED FLUTED PLASTIC SLEEVE, AND ENCASED IN A 6-INCH DIA. PVC PIPE WITH NGS LOGO CAP SURROUNDED BY CONCRETE. THE LOGO CAP AND CONCRETE ARE SET (FLUSH or RECESSED X CM) WITH THE GROUND.

The detailed location of each mark must include distances and directions from three or more definite objects in the mark's immediate vicinity such as existing reference marks, witness posts, centerlines of roads, edges of runways, ditches, power or telephone poles, or buildings. If steep slope distances were measured, that should be stated in the paragraph. The distances should be in meters (followed by English units in parentheses) and the directions should be cardinal and inter-cardinal directions, fully spelled out, for example "NORTH," "NORTHEAST," or "NORTH-NORTHEAST." Magnetic bearings from the reference objects are recommended to assist in future recoveries.

If the station is a PACS or SACS, conclude the text entry with the sentence:

> THIS STATION IS DESIGNATED AS THE PRIMARY AIRPORT CONTROL STATION. or
> THIS STATION IS DESIGNATED AS A SECONDARY AIRPORT CONTROL STATION.

Important points regarding descriptions:

1. Use the station designation and PID, exactly as listed in the NGS data base, in all survey records. Do not add dates, agency acronyms, or other information to the name, nor the stamping. Note, frequently the stamping and the official station designation are not the same. Many currently unpublishable stations on airports are named "ARP" or "CBL" followed by a distance. To avoid duplicate names in the database, recommend a designation change for these stations by adding the airport identifier and a space before "ARP" or "CBL" in the station designation field of the description, and note the recommended change in the reconnaissance report.

2. Correct NGS survey terminology shall be used in all station descriptions and reports, see Glossary to this document and GEODETIC GLOSSARY, NGS, 1986.

3. Correct aviation terminology (e.g., runways, taxiways, etc.) shall be used in all station descriptions. See FAA No. 405, Fourth Edition, Glossary, and FAA Documents : STANDARDS FOR AIRPORT MARKINGS, A GUIDE TO GROUND VEHICLE OPERATIONS ON THE AIRPORT, and STANDARDS FOR AIRPORT SIGN SYSTEMS.

4. A mark should not be described as destroyed unless the disk is found and returned to NGS. If there is strong evidence that the mark has been destroyed, state "PRESUMED DESTROYED" and the evidence in the recovery note.

5. Any work done to repair a disk should be described completely in the updated description.

6. Record the length of rod driven (and the length of the grease-filled sleeve) or the depth of the concrete monument in the station description.

7. Note, reference marks are abbreviated RM x in descriptions, but on pre-stamped "Reference Mark" disks they are stamped
"NO. x".

8. Run the digital D-file through program CHKDESC to identify format and coding errors.

DDPROC software:
The NGS software suite DDPROC is used to encode descriptions and recovery notes into D-file format for loading into the NGS data base. See ATTACHMENT 15 for information on downloading the software. The NGS Blue Book and the DDPROC documentation contain information for properly encoding descriptions. Helpful information is clarified in the following paragraphs:

- To properly setup the DDPROC software for data input, use the following codes for the *10* record, column 15 (DR Code), and column 16 (Recovery Type Code) of the blue book description file (from pg 3-3 of the Blue Book):

10 record Column 15

DR Code = D	for an original description of a newly set mark.
DR Code = R	for existing marks that are recovered, not found, etc.

10 record Column 16 (leave column 16 blank if column 15 is "D")

Recovery Type Code = F	for existing marks that do not have a NGS PID number. A full, three paragraph, recovery description is required.
Recovery Type Code = M	for existing marks that have a NGS PID number, a three paragraph format description in the database, and are recovered as described, not found, or require minor updates to the text description.
Recovery Type Code = T	for existing marks that have a NGS PID number, but require a new, full, three paragraph, recovery description.

-See D-file examples of each description format at the end of this attachment.

- Enter a "P" in cc 69-72 of the *10* record for all stations recovered that are suitable for GPS observations.

- The Blue Book does not require separate paragraphs in the *30* Records, but having separate paragraphs makes the description much easier to read. Therefore, when entering the text in DDPROC software, separate each paragraph with a blank line by inserting a $ at the end of the first two paragraphs.

- The terms "flush" or "recessed" in the *29* Record should be used to refer to the logo cap, not to the mark inside the logo cap. Both the logo cap recess amount and the amount the top of the rod is recessed below the logo cap must be included in the station description.

- A list of the proper organization abbreviations for the DDPROC software can be found in Annex C of the Bluebook. The DDPROC abbreviation for marks set by the National Geodetic Survey is NGS. The code for marks set by the U.S. Coast and Geodetic Survey is CGS. Note, USC&GS is used in this document.

***26* Record - Marker Type and Setting Codes for DDPROC**

The station description codes used in the DDPROC software are summarized in Annex I of the Bluebook.

- The DDPROC "Marker Type" and "Setting Code" for a concrete mark set in accordance with the requirements of ATTACHMENT 7 is "DH" or "DD", and "07". This classifies the station as stability code "C".

- The codes for a NGS 3-D stainless steel rod mark driven to a depth GREATER than 10 feet will be "I" and "59". This classifies the station as stability code "B".

- The codes for a NGS 3-D stainless steel rod mark driven to a depth of 10 feet or LESS will be "I" and "15". This setting code defaults to stability code "D" in the software. Upgrade the stability code to "B" for these stations that are set to the standards of this document by inserting a "B" in column 51 of the *26* record (Vertical stability override code).

- The codes for a disk set in sound bedrock will be "DH" or "DD", and "59". This classifies the station as stability code "B". Check Annex I for the proper codes to use for other types of marks.

Sample D-file Format

-Examples of the 4 formats described on page 3-3 of the Blue Book.

1. Original Description of a newly set mark:

```
009840*10*1004D N422140W0705916  4.0M         MASUFFOLK             P
009850*13*BOS A                                          C  0000
009860*20*I/WOOLPT              1999ARL   /
009870*26*59/                                 I  I B  NGS
009880*28*BOS A 1999
009890*29*M591.051.0 R3
009900*30*THE STATION IS LOCATED APPOXIMATELY 3 KM (1.85 MI) EAST OF BOSTON, 5
009910*30*KM (3.10 MI) SOUTH OF REVERE, 12 KM (7.45 MI) NORTH OF QUINCY, AND IS
009920*30*AT THE GENERAL EDWARD LAWRENCE LOGAN INTERNATIONAL AIRPORT, NEAR A
009930*30*FAA BUILDING ON THE EAST SIDE OF THE AIRPORT.  OWNERSHIP-- STATE OF
009940*30*MASSACHUSETTS, C/O VINCENT CARDILLO, AIRPORT OPERATIONS MANAGER,
009950*30*MASSACHUSETTS PORT AUTHORITY, ONE HARBOURSIDE DRIVE SUITE 2005, EAST
009960*30*BOSTON MA, 02128-2909.  PHONE NUMBER (617) 561-1936, FAX NUMBER (617)
009970*30*561-1889.  NOTE-- THIS STATION IS IN THE AIRPORT RESTRICTED AREA AND
009980*30*IS NOT INTENDED FOR USE BY NON-AIRPORT PERSONNELL.
009990*30*
010000*30*TO REACH THE STATION FROM THE SOUTH GATE ON THE WEST SIDE OF THE
010010*30*AIRPORT, PROCEED SOUTHERLY, EASTERLY, AND THEN NORTHERLY 1.7 MI
010020*30*(2.7 KM) ALONG THE PERIMETER ROAD TO THE FAA BUILDING ACCESS ROAD ON
010030*30*THE LEFT.  TURN LEFT AND PROCEED EASTERLY 0.05 MI (0.08 KM) TO THE
010040*30*FAA BUILDING ON THE RIGHT AND THE STATION ON A SMALL RISE AHEAD.
010050*30*
010060*30*THE STATION IS A STAINLESS STEEL ROD WITH PUNCHMARK DRIVEN TO A
010070*30*REFUSAL DEPTH OF 9.89 M (32.45 FT) ENCASED IN A 1 M (3.3 FT) LONG
010080*30*FINNED SLEEVE FILLED WITH NON-TOXIC GREASE AND RECESSED 8 CM BENEATH
010090*30*A NGS LOGO CAP STAMPED--BOS A 1999-- THAT IS FLUSH WITH THE GROUND.
010100*30*THE STATION IS 57.352 M (188.162 FT) ON AN AZIMUTH OF 296 DEGREES
010110*30*FROM THE NORTHWEST CORNER OF THE FAA BUILDING, 50.254 M (164.875 FT)
010120*30*ON AN AZIMUTH OF 15 DEGREES FROM THE INTERSECTION OF THE CENTERLINE
010130*30*OF THE HOLD LINE OF THE ROAD TO RWY 33L-15R AND THE CENTERLINE OF THE
010140*30*ROAD, 45.744 M (150.078 FT) ON AN AZIMUTH OF 159 DEGREES FROM THE
010150*30*ASOS, AND 3.280 M (10.761 FT) ON AN AZIMUTH OF 64 DEGREES FROM THE
010160*30*CENTER OF A 3 M (9.8 FT) DIAMETER GRAVEL CIRCLE AT THE TOP OF THE
010170*30*HILL THAT THE STATION IS ON.  THIS STATION IS DESIGNATED AS THE
010180*30*PRIMARY AIRPORT CONTROL STATION.
```

2. For existing marks that do not have a PID number.
   A full, properly formatted description is required for input into the database.

```
003640*10*0041RFN391620W1033953 1665M         COLINCOLN             P
003650*13*LIMON CBL 400                                    C  0000
003660*20*A/NGS                 1989     I/MSAM                19990407KCH  G
003670*26*07/                                DQ O C  NGS
003680*28*400 M 1989
003690*30*THE STATION IS LOCATED ABOUT 2 KM (1.25 MI) EAST OF LIMON, NORTHEAST
003700*30*OF INTERSTATE HIGHWAY 70, AT THE LIMON MUNICIPAL AIRPORT.  IT IS
003710*30*NORTH OF US HIGHWAY 24 AND EAST OF RUNWAY 16-34.  ACCESS ON THE
003720*30*AIRPORT IS NOT CONTROLLED, CONTACT THE AIRPORT MANAGER DAVE STONE
003730*30*TELEPHONE 719-775-2346.  OWNERSHIP--LIMON MUNICIPAL AIRPORT
003740*30*
003750*30*TO REACH THE STATION FROM INTERSTATE HIGHWAY 70 AT EXIT 361 (LIMON) ,
003760*30*GO NORTH ON US HIGHWAY 24 FOR 0.2 MI (0.3 KM) TO A SIDE ROAD LEFT,
003770*30*THE ENTRANCE TO THE AIRPORT.  TURN LEFT, NORTHWEST, FOR 0.15 MI
003780*30*(0.24 KM) TO A CONCRETE APRON.  TURN RIGHT, EAST, ACROSS THE APRON
003790*30*FOR 0.1 MI (0.2 KM) TO THE EAST EDGE OF RUNWAY 16-34.  TURN LEFT,
003800*30*NORTH, ALONG THE EAST EDGE OF RUNWAY 16-34 FOR 0.25 MI (0.40 KM) TO
003810*30*THE STATION ON THE RIGHT
003820*30*
003830*30*THE MARK IS A BRASS NGS CALIBRATION BASELINE DISK SET IN THE TOP
003840*30*CENTER OF A 50 CM ROUND CONCRETE POST FLUSH WITH THE GROUND.  IT IS
003850*30*51.2 M (168.0 FT) WEST OF A FENCE, 15.1 M (49.5 FT) EAST OF THE EAST
003860*30*EDGE OF RUNWAY 16-34, 1.2 M (3.9 FT) EAST OF A FIBERGLASS WITNESS
003870*30*POST AND 1.2 M (3.9 FT) WEST OF A FIBERGLASS WITNESS POST.  THIS
003880*30*STATION IS DESIGNATED AS A SECONDARY AIRPORT CONTROL STATION.
```

3. Existing marks that have a PID number and a correct, properly formatted description already in the database:

```
032410*10*0501RMN400554W1021421 1108M         COYUMA                P   LK0778
032420*13*FAA 2V5 A
032430*20* /                               I/MSAM                19990412KCH  G
032440*26*59/                                  I  I B  NGS
032450*28*FAA 2V5 A 1991
032460*29*M596.4 .9  F
032470*30*RECOVERED AS DESCRIBED.  PERMISSION TO USE THIS STATION MUST BE
032480*30*OBTAINED FROM THE AIRPORT MANAGER.  CONTACT MR BOB KLEIN AT 33920
032490*30*STATE HIGHWAY 385, WRAY, COLORADO, 80758, TELEPHONE 970-332-4656.
032500*30*THIS STATION IS DESIGNATED AS A PRIMARY AIRPORT CONTROL STATION.
```

4. Existing marks that have a PID number, but require a new, properly formatted description written:

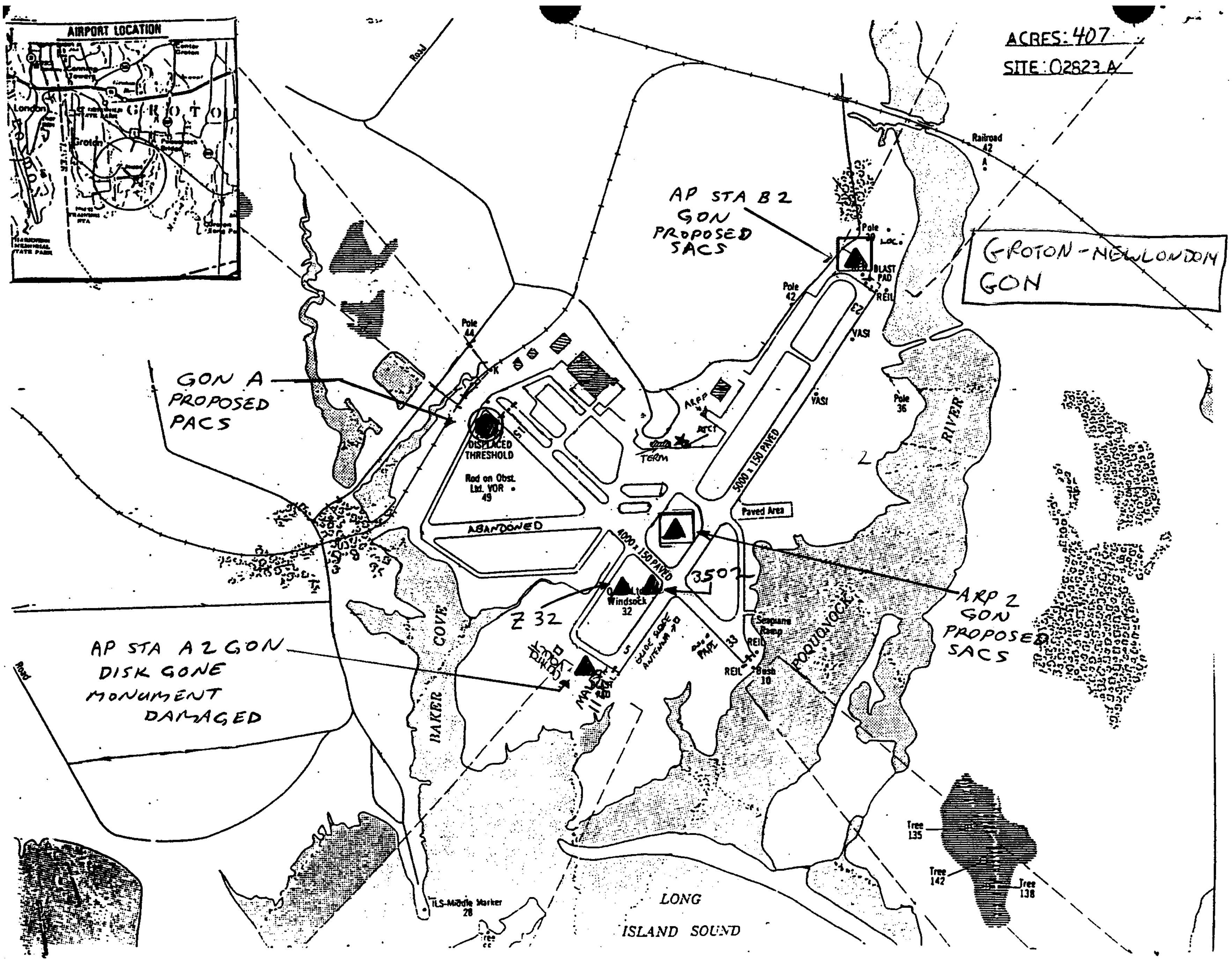
```
011030*10*0163RTN375705W1075340 2694M         COSAN MIGUEL          P   HL0677
011040*13*TEX A                                              C  0000
011050*20*A/NOS                  1990     I/MSAM                  19990428KCH  G
011060*26*07/                                 DD N C  NOS
011070*28*TEX A 1990
011080*30*THE STATION IS LOCATED ABOUT 25 KM (15.55 MI) SOUTHWEST OF RIDGEWAY,
011090*30*AND 9 KM (5.60 MI) WEST OF TELLURIDE, COLORADO, AT THE TELLURIDE
011100*30*REGIONAL AIRPORT.  IT IS AT THE EAST END OF THE AIRPORT AND EAST OF
011110*30*THE RUNUP AREA AT THE RELOCATED THRESHOLD.  THIS AIRPORT IS NOT
011120*30*CONTROLLED.  PERMISSION TO USE THIS STATION MUST BE OBTAINED FROM THE
011130*30*AIRPORT MANAGER.  CONTACT MR RICHARD NUTTALL AT POST OFFICE BOX 1807
011140*30*TELLURIDE, COLORADO, 81435, TELEPHONE 970-728-5313.
011150*30*OWNERSHIP--TELLURIDE REGIONAL AIRPORT
011160*30*
011170*30*TO REACH THE STATION FROM THE POST OFFICE IN TELLURIDE AT THE
011180*30*SOUTHEAST CORNER OF EAST COLORADO AND SOUTH WILLOW, GO WEST ON EAST
011190*30*COLORADO FOR 3.5 MI (5.6 KM) TO A SIDE ROAD RIGHT.  TURN RIGHT,
011200*30*FOLLOW THE LAST DOLLAR ROAD UP THE MOUNTAIN FOR 2.3 MI (3.7 KM) TO
011210*30*THE AIRPORT PARKING LOT.  TURN RIGHT, NORTH, FOR 0.05 MI (0.08 KM) TO
011220*30*A SIDE ROAD LEFT.  TURN LEFT, WEST, FOR 0.05 MI (0.08 KM) TO AN
011230*30*ELECTRIC GATE, PUSH THE BUTTON TO REACH TELLURIDE AIRPORT OPERATION,
011240*30*CONTINUE AHEAD FOR 0.05 MI (0.08 KM) TO THE APRON.  TURN LEFT, SOUTH
011250*30*ACROSS THE APRON FOR 0.1 MI (0.2 KM) TO THE SOUTH EDGE OF THE APRON.
011260*30*TURN LEFT, EAST ACROSS THE APRON FOR 0.1 MI (0.2 KM).  VEER RIGHT TO
011270*30*TAXIWAY A, GO EAST ON TAXIWAY A FOR 0.2 MI (0.3 KM) TO TAXIWAY A4.
011280*30*TURN RIGHT, SOUTH, ON TAXIWAY A4 FOR 0.05 MI (0.08 KM) TO RUNWAY
011290*30*9-27.  TURN LEFT, EAST ON THE RELOCATED THRESHOLD FOR 0.1 MI (0.2 KM)
011300*30*TO THE EAST END OF THE ASPHALT AND THE STATION ON THE LEFT
011310*30*
011320*30*THE MARK IS A NOS DISK IN A 25 CM ROUND CONCRETE POST, RECESSED 3 CM
011330*30*BELOW THE GROUND.  IT IS 37 M (121.4 FT) EAST OF THE NORTHWEST CORNER
011340*30*OF AN OLD RUNUP AREA, 30.5 M (100.1 FT) NORTH-NORTHEAST OF THE
011350*30*CENTERLINE OF RUNWAY 9-27 AND 15.8 M (51.8 FT) EAST OF THE NORTHEAST
011360*30*CORNER OF THE OLD RUNUP AREA AND IN LINE WITH THE NORTH EDGE OF THE
011370*30*OLD RUNUP AREA.  THIS STATION IS DESIGNATED AS A SECONDARY AIRPORT
011380*30*CONTROL STATION.
```

Station Recovery Data Tables
Maine ANA Survey, 1998

(LEW) Auburn-Lewiston Municipal Airport; Lewiston, ME

Station Name	**PID**	**Estab. Agency**	**Order**	**Stability**	**Recovery Condition**	**Comments**
LEW A	n/a					Proposed PACS, SS rod mark
ARP 1964	PF0086	CGS	H 4S, V1	C	Good	SACS#2
LEW AP STA B	PF0085	CGS	H 2, V 1	C	Good	SACS#1
A 196	PF0720	CGS	BA, 1	B	Good	HARN Tie
E 171	PF0723	NOS	V 1	B	Good	BM Tie
G 171	PF0724	NOS	V 1	A	Good	BM Tie
M 164	PF0080	NOS	V 1	B	Not Found	Searched 20 min, 2 people
ARP RM1	PF1079	CGS	H 26	C	Good	Not suitable for GPS Obs
ARP RESET	PF1080	CGS	H 24, V 3	C	Good	Too close to Rwy
LEW AP STA C	PF0083	CGS	H 24, V 3	C	Good	Intervisibility problem w/ SACS and PACS
TARMAC	PF0087	MEDOT	H 2, V 3	C	Good	Could be destroyed in planned future construction

Airport is uncontrolled with restricted access (gate with lock) and no escort required. Radio communications is through VHF UNICOM 122.8. Contact the airport manager, Joe Manager (207) 287-1234 prior to entry. Intervisibility between the PACS and SACS is good. Construction of a new hangar is planned by the SE side of the main tarmac.


ACRES: 407
SITE: 02823.A
GROTON-NEWLONDON
GON
AIRPORT LOCATION
AP STA B2
GON
PROPOSED
SACS
GON A
PROPOSED
PACS
ARP 2
GON
PROPOSED
SACS
AP STA A2 GON
DISK GONE
MONUMENT
DAMAGED
Z 32
350
Railroad
42
Pole
30
LOC
BLAST
PAD
REIL
Pole
42
VASI
Pole
36
RIVER
5000 x 150 PAVED
Paved Area
ARPP
ATCT
TERM
Pole
44
DISPLACED
THRESHOLD
Rod on Obst.
Ltd. VOR
49
ABANDONED
4000 x 150 PAVED
Windsock
32
Seaplane
Ramp
POQUONOCK
REIL
Bush
10
COVE
BAKER
Road
Tree
135
Tree
142
Tree
138
ILS-Middle Marker
28
LONG
ISLAND SOUND